

### REMARKS

This application has been reviewed in light of the Office Action dated October 22, 2007. Claims 1-9 are presented for examination, of which Claims 1, 4 and 7 are in independent form. Claims 1-4 and 7-9 have been amended to define still more clearly what Applicant regards as his invention. Favorable reconsideration is respectfully requested.

In the outstanding Office Action, Claims 1-9 were rejected under the first paragraph of 35 U.S.C. § 112, as not being supported by disclosure in the original application.

Independent Claim 1 is directed to a color conversion method of inputting first and second color difference values and obtaining a corresponding saturation value. The method comprises creating a main lookup table, which stores saturation values for color difference values, and a sub-lookup table for obtaining a value corresponding to the first color difference value for accessing the main lookup table. According to Claim 1, the first color difference value is equal to or less than the second color difference value. The method also comprises determining an address of the main lookup table in correspondence with the first and second color difference values on the basis of the value obtained from the sub-lookup table by the first color difference value and a difference between the first and second color difference values, and obtaining a saturation value corresponding to the first and second color difference values by accessing the main look-up table using the address determined in the determining step.

In Claim 1, the first color difference value corresponds to C1 in the preferred embodiment, and the second color difference value corresponds to C2. In

equation (1) at page 11 of the original specification, an address of main look-up table is obtained by  $\{\text{SUB\_LUT}[C1] + (C2-C1)\}$ . Page 12, line 1, in the original specification states that " $C1 \leq C2$ ", that is, that the value of the first color difference signal is less than or equal to that of the second color difference signal.

Moreover, SUB\_LUT[C1] represents the value obtained from the sub-lookup table by the first color difference value (C1). The address of the main lookup table is, therefore, determined by the value (SUB\_LUT[C1]) obtained from the sub-lookup table by the first color difference value (C1) and the difference (C2-C1) between the first and second color difference values.

Accordingly, it is believed that Claim 1 is fully supported by the original application.<sup>1/</sup> Moreover, the foregoing remarks apply to Claims 2-9 as well, and therefore, withdrawal of the rejection under Section 112 is respectfully requested.

Claims 1-4 and 7-9 were rejected under 35 U.S.C. § 103(a) as being obvious from U.S. Patents 5,517,335 (Shu), 5,089,882 (Kaye et al.) and 6,757,427 (Hongu) taken in combination. In addition, Claim 5 was rejected as being obvious from those patents in view of U.S. Patent 5,809,181 (Metcalf), and Claim 6, as being obvious from those four patents in view of U.S. Patent 6,650,336 (Suzuki).

*Shu* relates to a system that computes an average value of RGB and selects a minimum value and a maximum value of three primary colors RGB. *Shu* uses a first lookup table (LUT1) and a second lookup table (LUT2) and calculates a variable delta by using a value retrieved from the LUT1 by using the average value and multiplies the

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<sup>1/</sup> It is of course to be understood that the claim scope is not limited by the details of this or any other particular embodiment that may be referred to.

retrieved value by a second value retrieved from the LUT2 by using the difference between the maximum and minimum values. Finally, the two values obtained from the LUT1 and LUT2 are multiplied together to determine the delta value.

The difference between the maximum and minimum values in *Shu* is distinct from the difference between the first and second color difference values in claim 1. Further, *Shu* has two LUTs, but does not determine an address of a main lookup table on the basis of the value obtained from a sub-lookup table by a first color difference value and a difference between the first and second color difference values.

The *Kaye* system addresses a saturation in an EPROM by a unique pairs of values corresponding to the incoming R-Y and B-Y signals. *Kaye*, however, does not teach or suggest a sub-lookup table for obtaining a value corresponding to a first color difference value, as in claim 1. Further, *Kaye* does not teach or suggest determining an address of the main lookup table in correspondence with the first and second color difference values, on the basis of the value obtained from the sub-lookup table by the first color difference value and a difference between the first and second color difference values.

For the reasons made of record in his previous Amendment, Applicant submits that Claim 1 is allowable over those two patents, taken separately or in any permissible combination (if any), and from the outstanding Office Action, it is understood that the Examiner agrees that that claim is allowable over those two documents.

*Hongu* relates to an image processing apparatus having an edge processing section for enhancing edge portions of an image such as a photograph on which characters are superimposed, to produce an encoded (compressed) image in which the sharp edges of the characters are preserved, without requiring an unacceptable amount of coded data to

represent the image. According to col. 6, lines 62-65, the first color difference is equal to or larger than the second color difference. That is, in performing the edge enhancement in a region of the image where it has been determined that edge enhancement is needed, the *Hongu* apparatus sets the value of a given pixel to be the same as that of whichever of its neighbors its original color is closer to (col. 13, lines 31-45).

The Office Action states that determining an address of the main lookup table is disclosed in *Shu* at col. 7, lines 45-47. That passage describes that the values stored in the lookup table fall on a curve which is symmetric about an average value (128). *Shu*, however, does not teach or suggest determining an address of a main lookup table in correspondence with first and second color difference values on the basis of a value obtained from a sub-lookup table by the first color difference value and a difference between the first and second color difference values, as recited in Claim 1.

Applicant also notes that the Office Action construes “using a lookup table 54 for obtaining a value corresponding to the first color difference value (column 5, lines 51-55 of *Kaye*)” as corresponding to determining an address of the main lookup table in correspondence with the first and second color difference values on the basis of the value obtained from the sub-lookup table by the first color difference value, as recited in Claim 1. Applicant disagrees, for the following reasons. In the *Kaye* system, the contents of the lookup table 54 are addressed by unique pairs of values corresponding to the incoming R-Y and B-Y signals (col. 7, lines 57-59). This means that the lookup table is addressed by the first and second difference signals. In contrast, what is recited in Claim 1 is that a value corresponding to the first color difference value is obtained by using a sub-lookup table, and an address in the main lookup table is determined *on the basis of the value obtained*

*from the sub-lookup table by the first color difference value and a difference between the first and second color difference values.* Applicant does not believe that any teaching of such a way of getting an address is to be found in *Kaye*, or in *Shu* or *Hongu*. Accordingly, Applicant submits that Claim 1 is allowable over those three patents, taken separately or in any permissible combination (if any).

Independent Claims 4 and 7 are, respectively, directed to a lookup table and an apparatus that have the characteristics discussed above with regard to Claim 1, and are therefore believed also to be allowable for the reasons discussed above.

A review of the other art of record has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and allowance of the present application.

Applicant's undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,

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